

LXR Agonist Compound A Activates the Expression of SSG

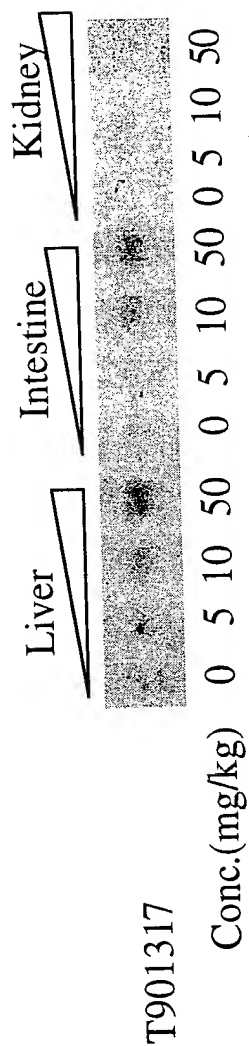
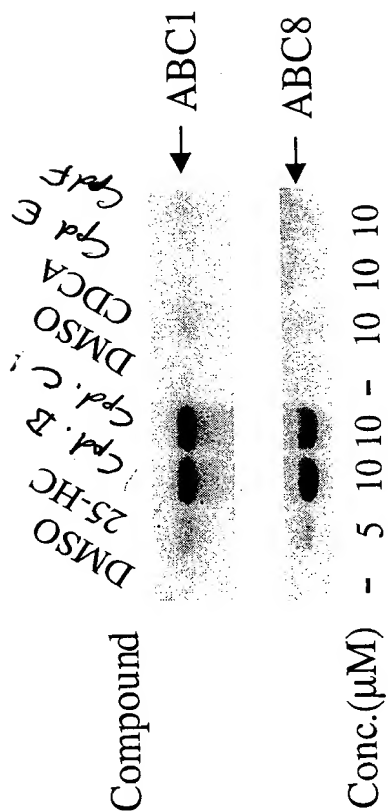


FIGURE 1

Oxysterol and LXR Agonists Activate the Expression of Cholesterol Transporters, ABC1 and ABC8



LXR agonist: Cpd B, C
FXR agonist: Cpd E, F

FIGURE 2

Induction of ABC1 in Liver, Intestine and Kidney of C57BL/6 Mice by LXRa Agonist *Cpd A*

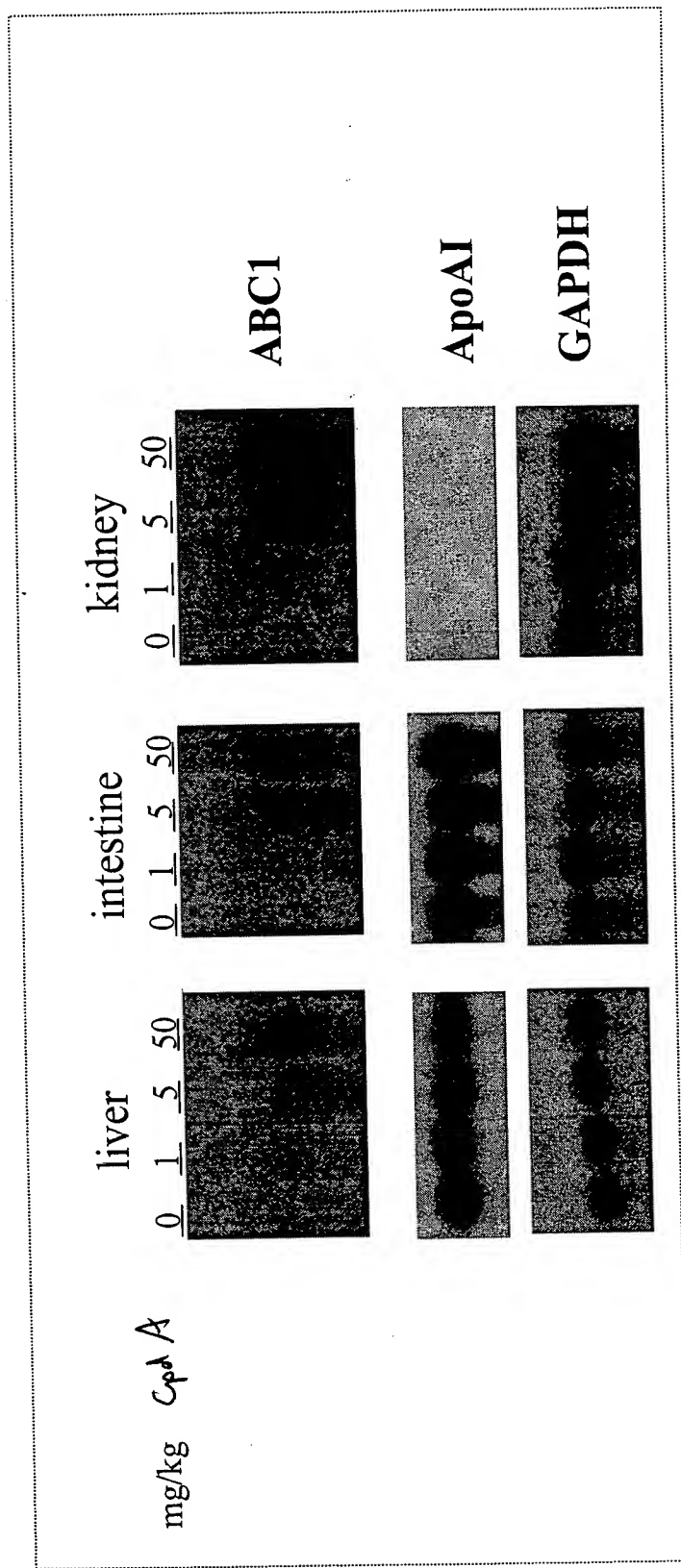


FIGURE 3

Cpd A Stimulates Cholesterol Efflux From Caco-2 Cells

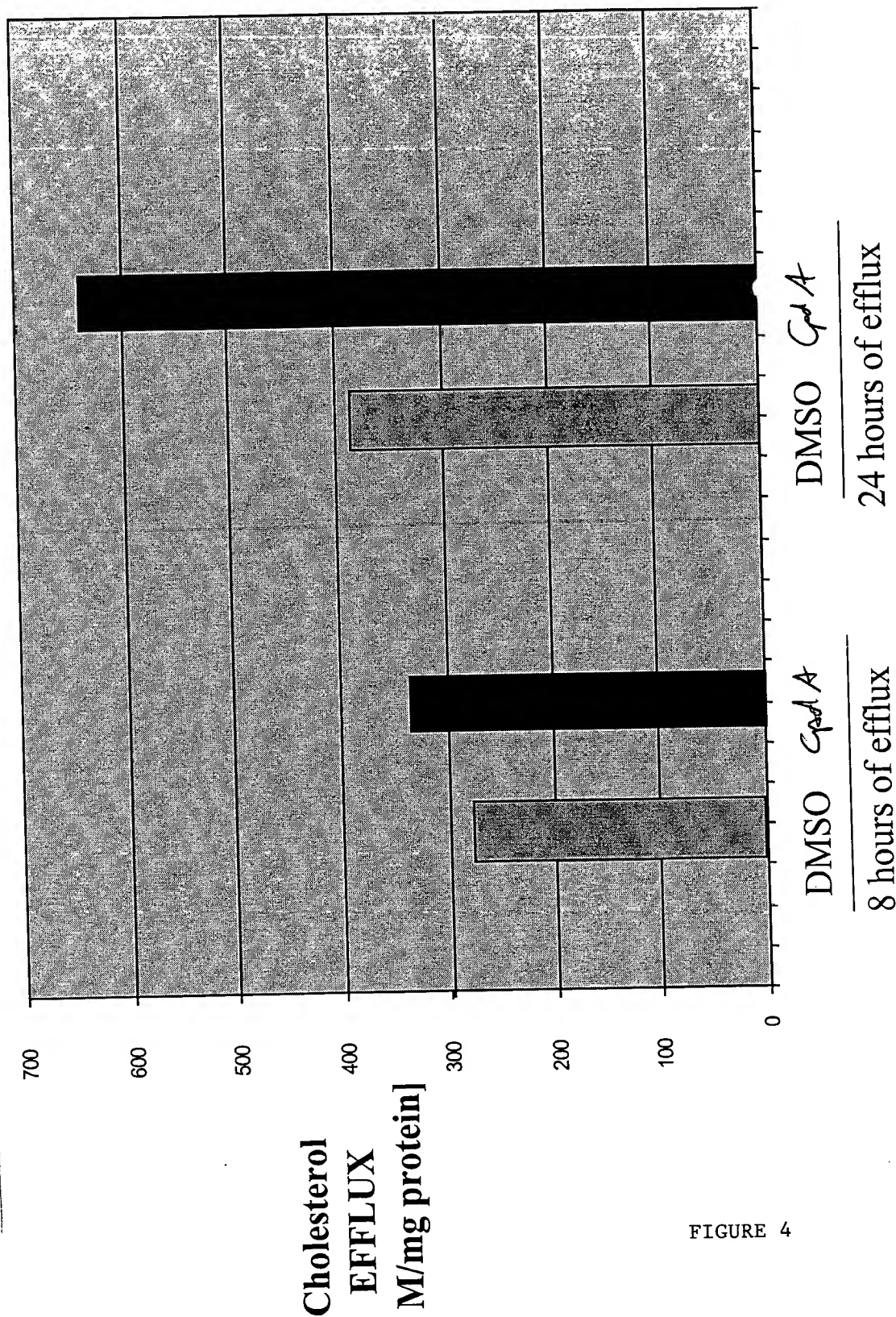


FIGURE 4

How Does LXR Regulate Cholesterol Absorption ? *-A Working Model -*

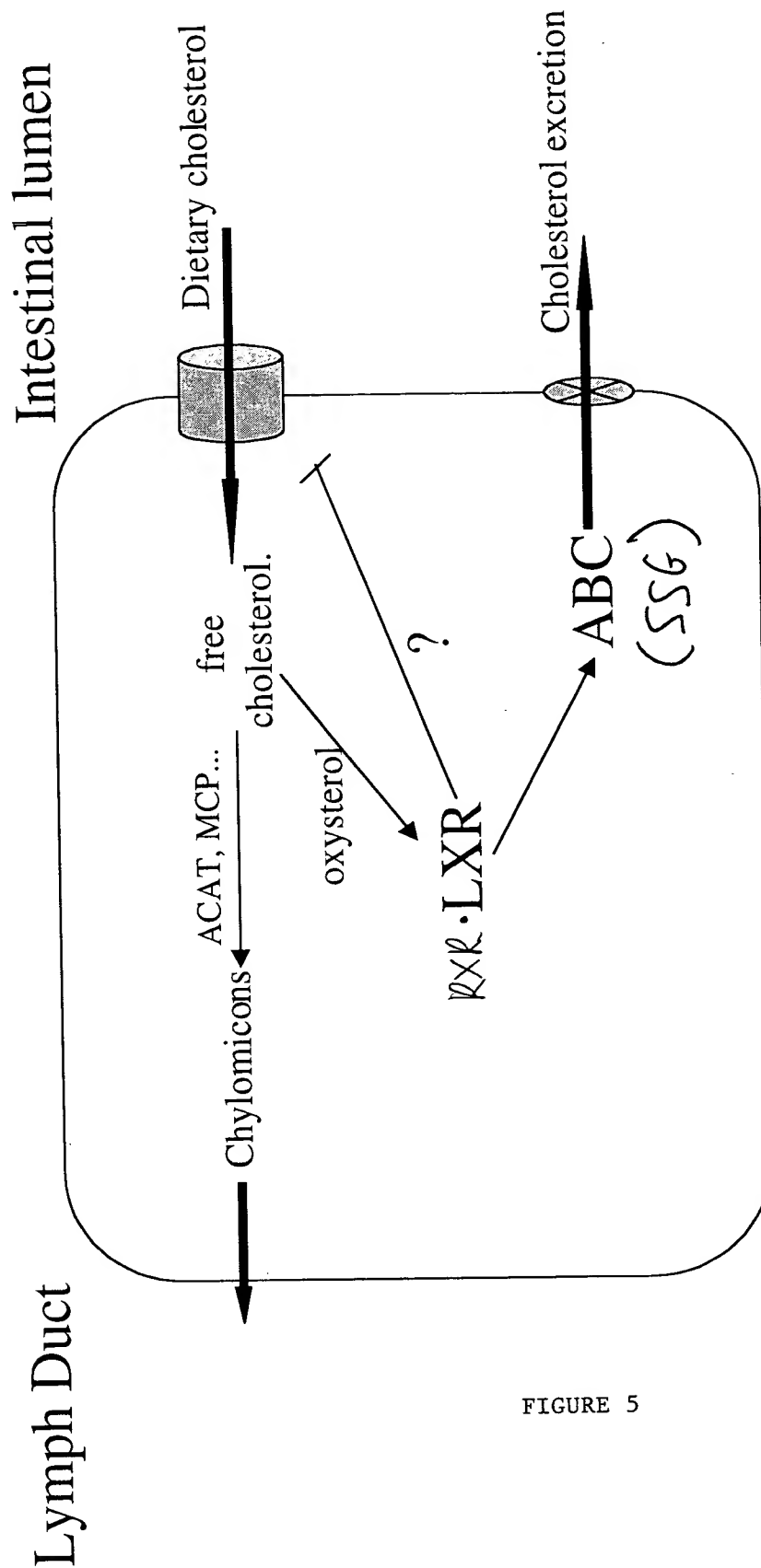


FIGURE 5

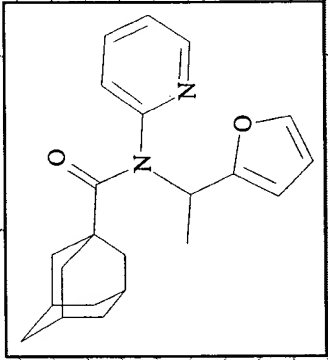
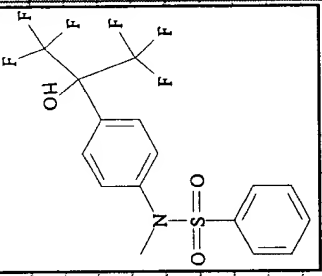
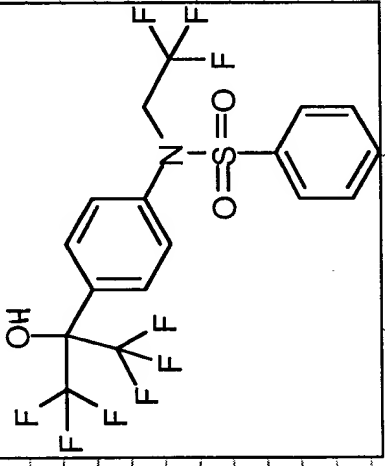
Compound C			
Compound B			
Compound A			

FIGURE 6

AGGACATT

FIGURE 7

[illegible]

FIGURE 8

Alignment of Human and Mouse SSG Protein Sequences

hSSG.pro	MGDLSSLTPG	GSMGLQVNRG	QSSSLEGAPA	TAPEP-HSLG	ILHASYSVSH	49
mSSG.pro	MGELPFLSPE	GARGPHINRG	SLSSLEQGSV	TGTEARHSLG	VLHVSYSVSN	50
hSSG.pro	RVRPWWDITS	CRQOWTRQIL	KDVSLYVESG	QIMCILGSSG	SGKTTLLDAM	99
mSSG.pro	RVGPWWNIKS	CQOKWDRQIL	KDVSLYIESG	QIMCILGSSG	SGKTTLLDAI	100
hSSG.pro	SGRLGRAGTF	LGEVYVNGRA	LRREQFQDCF	SYVLQSDTLL	SSLTVRETLH	149
mSSG.pro	SGRLRRTGTL	EGEVFVNGCE	LRRDQFQDCF	SYVLQSDVFL	SSLTVRETLR	150
hSSG.pro	VTALLAIRRG	NPGSFQKKVE	AVMAELSLSH	VADRLIGNYS	LGGISTGERR	199
mSSG.pro	YTAMLALCRS	SADFYNNKVE	AVMTLSLSH	VADQMIGSYN	FGGISSGERR	200
hSSG.pro	RVSTIAAQLLQ	DPKVMLFDEP	TTGLDCMTAN	QIVLLVELA	RRNRIVVLT	249
mSSG.pro	RVSTIAAQLLQ	DPKVMMLDEP	TTGLDCMTAN	QIVLLLAELA	RRDRIVIVTI	250
hSSG.pro	HQPRSELFOL	FDKIAILSFG	ELIFCGTPAE	MLDFFNDCGY	PCPEHSNPFD	299
mSSG.pro	HQPRSELFQH	FDKIAILTYG	ELVFCGTPEE	MLGFFNNCGY	PCPEHSNPFD	300
hSSG.pro	FYMDLTSVDT	QSKEREIETS	KRVOMIESAY	KKSATCHKTL	KNIERMKHLK	349
mSSG.pro	FYMDLTSVDT	QSREREIETY	KRVOMLECAF	KESDIYHKIL	ENIERARYLK	350
hSSG.pro	TLPMVPFKTK	DSPGVFSKLG	VLLRRVTRNL	VRNKLAVLTR	LLQNLIMGLF	399
mSSG.pro	TLPMVPFKTK	DPPGMFCKLG	VLLRRVTRNL	MRNKOAVIMR	LVQNLIMGLF	400
hSSG.pro	LLEFVLVRVS	NVEKGAIQDR	VGLLYQFVGA	TPYTGMLNAV	NLFPVLRVVS	449
mSSG.pro	LIFYLLRVQN	NTLKGAVQDR	VGLLYQLVGA	TPYTGMLNAV	NLFPMLRAVS	450
hSSG.pro	DOESQDGLYQ	KWQMLLAYAL	HVLPFSVAT	MISSVCYWT	LGLHPEVARF	499
mSSG.pro	DOESQDGLYH	KWQMLLAYVL	HVLPFSVIAT	VIFSSVCYWT	LGLYPEVARF	500
hSSG.pro	GYFSAALLAP	HLIGEFLLTV	LLGIVQNPNI	VNSVALLSI	AGVLVGSGLF	549
mSSG.pro	GYFSAALLAP	HLIGEFLLTV	LLGIVQNPNI	VNSIVALLSI	SGLLIGSGFI	550
hSSG.pro	RNIQEMPTEF	KIISYFTFOK	YCSEILVVNE	FYGLNFTCGS	SNVSVTTNPM	599
mSSG.pro	RNIQEMPTEL	KILGYFTFOK	YCCEILVVNE	FYGLNFTCGG	SNISMLNHPM	600
hSSG.pro	CAFTQGIQFI	EKTCPGATSR	FTMNFLLIYS	FIPALVILGI	VFKIRDHLI	649
mSSG.pro	CAITQGVQFI	EKTCPGATSR	FTANFLIYG	FIPALVILGI	VIFKVRDYLI	650
hSSG.pro	SR					651
mSSG.pro	SR					652

FIGURE 9

Reference Number: 5711
Stanford RH Panel: TNG4
Lowest LOD Reported: 6
Chromosome Value: 0

Results for HT

Submitted

Vector:00010000000001000100001010010000000100000010001000000000010000000000
001000000000001000100

SHGCNAME CHROM# LOD_SCORE DIST.(cRs)

1 SHGC-36672 2 7.52 35

Vector:00000000R00001010100100010011100000100000010001000000000101000000000
001000000000R01000100

2 SHGC-8189 2 6.53 44

Vector:00000000100001010100100010011100000100000010001000000000101000000000
001000000000101000100

3 SHGC-699 2 6.03 48

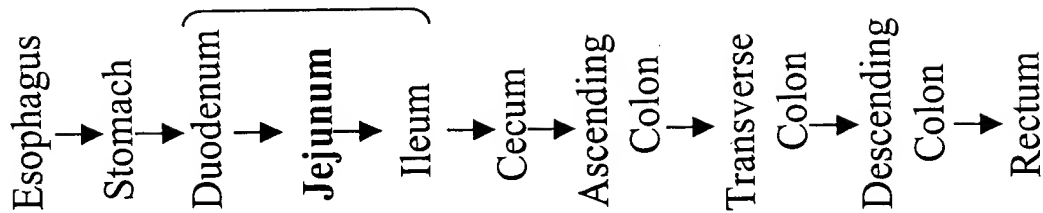
Vector:00010000000001000100001010010100100001000110001000100000101000000000
000000100000011000100

The number of markers searched was 32440.

FIGURE 10

0937993-041804
F08F40" 2664E860

Expression Profile of β g in the GI Tract



Stomach
Rectum
Liver
Jejunum
Ileum
Ileocecum
Esophagus
Duodenum
T. Colon
D. Colon
A. Colon
Cecum

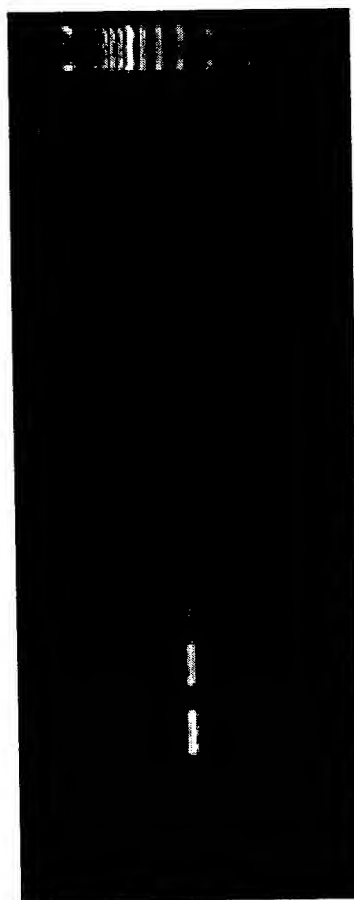


FIGURE 11

Human ⁵⁵⁶ is Predominantly Expressed in the Liver and Small Intestine

Brain
Heart
Kidney
Liver
Lung
Pancreas
Placenta
S. Muscle
Colon
Ovary
PBL
Prostate
S. Intestine
Spleen
Testis
Thymus

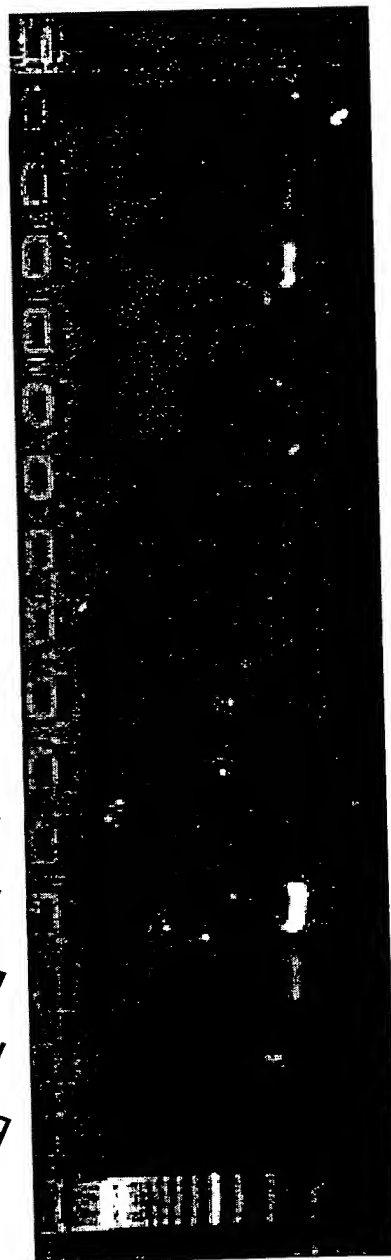
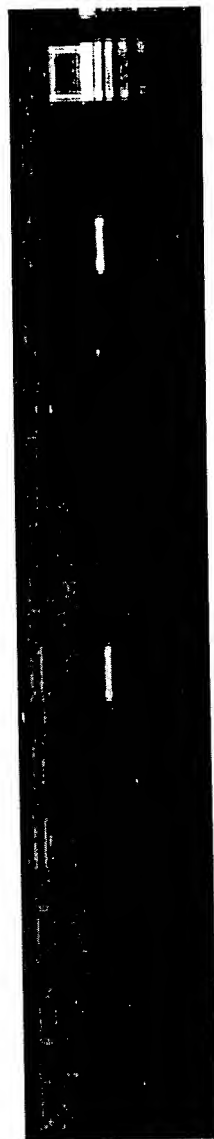


FIGURE 12

Mouse $\beta\beta$ is Selectively Expressed in the Liver and Small Intestine

Thymus
S. Muscle
Testis
Skin
S. Intestine
Lung
Kidney
Heart
Spleen
Liver
Brain



Mouse Multiple Tissue RT-PCR

cDNA Cloning and Genomic Organization of 55q

- The predicted human and mouse proteins share 80% identity and is 28% identical to *Drosophila* Brown
- Human ABCG5 contains 13 exons and spans at least 25kb of genomic DNA

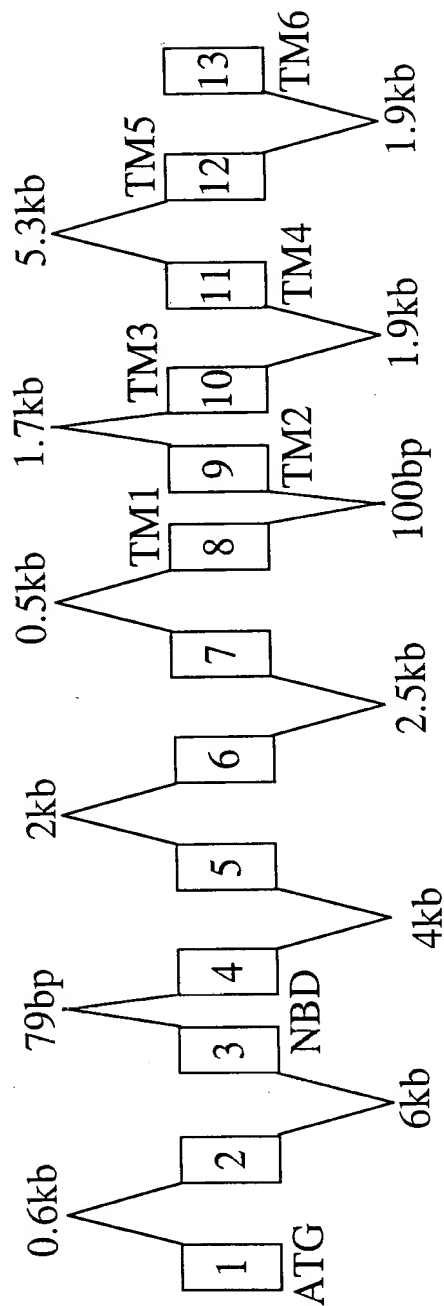


FIGURE 14A

Human SSG nucleotide sequence—13 Exons

[EXON 1
 GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGTCCGGCCACCAGAAAATTTGCCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT
 GGAGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
 CAGCGTCAGCACC CGCTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGAC
 CAGGCAGATCCTCAAAGATGTCTCCTTGTACGTGGAGAGCGGGCAGATCATGTGCATCCT
 AGGAAGCTCAGGCTCCGGGAAAACACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCG
 CGCGGGGACCTTCCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTT
 CCAGGACTGCTTCTCCTACGTCCTGCAGAGCGACACCCTGCTGAGCAGCCTCACCGTGCG
 CGAGACGCTGCACTACACCGCGCTGCTGGCCATCCGCCGCGGCAATCCCGGCTCCTTCCA
 GAAGAAGGTGGAGGCCGTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGAT
 TGGCAACTACAGCTTGGGGGGCATTTCACGGGTGAGCGGCGCCGGGTCTCCATCGCAGC
 CCAGCTGCTCCAGGATCCTAAGGTCATGCTGTTTGATGAGCCAACCACAGGCCTGGACTG
 CATGACTGCTAATCAGATTGTCGTCCTCCTGGTGGAAGTGGCTCGCAGGAACCGAATTGT
 GGTTCCTCACCATTACACAGCCCCGTTCTGAGCTTTTTTCACTCTTTTGACAAAATTGCCAT
 CCTGAGCTTCGGAGAGCTGATTTTCTGTGGCACGCCAGCGGAAATGCTTGATTCTTCAA
 TGAAGTGGGTTACCCTTGTCTGAACATTCAAACCCCTTTTGACTTCTATATGGACCTGAC
 GTCAGTGGATACCCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAGTCCAGATGAT
 AGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAACTTTGAAGAATATTGAAAGAAT
 GAAACACCTGAAAACGTTACCAATGGTTCTTTCAAACCAAAGATTCTCCTGGAGTTTT
 CTCTAAACTGGGTGTTCTCCTGAGAGAGTGACAAGAACTTGGTGAGAAATAAGCTGGC
 AGTGATTACGCGTCTCCTTCAGAATCTGATCATGGGTTTGTTCCTCCTTTTCTTCGTTCT
 GCGGGTCCGAAGCAATGTGCTAAAGGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCA
 GTTTGTGGGCGCCACCCCGTACACAGGCATGCTGAACGCTGTGAATCTGTTCCCGTGCT
 GCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGCAGATGATGCT
 GGCCTATGCACTGCACGTCCTCCCCTTCAGCGTTGTTGCCACCATGATTTTCAGCAGTGT
 GTGCTACTGACGCTGGGCTTACATCCTGAGGTTGCCCGATTGGATATTTTCTGCTGC
 TCTCTTGGCCCCCACTTAATTGGTGAATTTCTAACTCTTGTGCTACTTGGTATCGTCCA
 AAATCCAAATATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTGG
 ATCTGGATTCTCAGAAACATAAAGAAATGCCCATTCCTTTTAAATCATCAGTTATTT
 TACATTCCAAAATATTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTT
 CACTTGTGACAGCTCAAATGTTTCTGTGACAACTAATCCAATGTGTGCCTTCACTCAAGG
 AATTCAATTCAATTGAGAAAACCTGCCAGGTGCAACATCTAGATTACAATGAACTTTCT

FIGURE 14B (1 of 2)

GATTTTGTATTTCATTTATTCCAGCTCTTGTCATCCTAGGAATAGTTGTTTTCAAATAAG
 GGATCATCTCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAATGGAAGTGAAGCTGCCC
 ACTGTGCATGACTGCTCTGAACGCTGAAATGAGAGTGCCATGTATTTCTTTCTTGACAG
 GACATCTCAAGTCTTTTAACCATTAAGACTCCATTTGTGCCTCTTGATCCAAGCAGGCC
 TTGAATGCAATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACCTGCAGGGACATGTGGT
 TATTTGGAAATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG]

Exon number	exon size	5' splicing site	3' splicing site	Intron size
1			GCGTCAGgtaaggcag	~600bp
2	124	cctttaaagCCACCGC	AGCTCAGgtaagcttg	~6kb
3	137	gcccgcagGCTCCGG	CCTGCAGgtgggcgcg	79bp
4	103	ctcctgcagAGCGACA	AAGGTGGgtgcagccc	~4kb
5	129	tcaggtggAGGCCGT	GATCCTAgtaagtggc	~2kb
6	140	tgctggcagAGGTCAT	TTTTCAGgtaagaggt	~2.5kb
7	130	tctggtcagCTCTTTG	TTCTATAgtaagtttt	~0.5kb
8	214	aacttttagTGGACCT	TCCTGAGgtaagaggc	100bp
9	206	tgtttcagGAGAGTG	AATCTGTgtaagtgcc	~1.7kb
10	139	catccccagTTCCCGT	GCTACTGgtgaggggtt	~1.9kb
11	186	cttttctagGACGCTG	TCCTCAGgtaagatat	~5.3kb
12	113	tttcttaagAAACATA	ACTTGTGgtaagtatt	~1.2kb
13		ccttgacagGCAGCTC		
Total				~25.9kb

Exonic sequences in capital letter

FIGURE 14B (2 of 2)